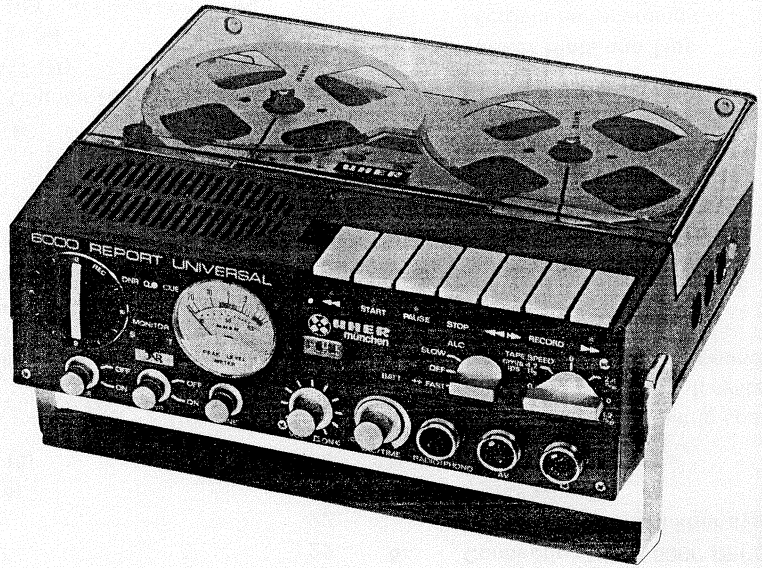
UHER-00364



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6000 REPORT UNIVERSAL

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Bedienungsanleitung
Operating Instructions
Instructions d'emploi

364

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1. Setting Up UHER 6000 REPORT UNIVERSAL for Use

UHER 6000 REPORT UNIVERSAL combines the advantages of a high-quality tape recorder with those of an ideal dictating machine to offer almost unlimited possibilities of use.

The machine is designed for powering with either a special rechergeable (nicad) storage battery or a mains power unit inserted in the battery compartment. To insert the one or the other, simply turn the securing screw on the bottom plate of the recorder anti-clockwise and remove the plate. In addition, the UHER 6000 REPORT UNIVERSAL, via the appropriate lead, may also be connected to an external DC power source like an automotive battery.

Operating time with a storage battery is approximately two hours, whether operation is continuous or with interruptions.

1.1 Testing Battery Strength

When button **(11)** is pressed while the recorder is switched on, the level meter will indicate battery strengh, provided no external power source is connected. If the pointer moves well into the green segment of the scale, the battery still has good operating strenght. If, however, the pointer only just remaches the beginning of the green segment, battery strength is too low and the storage battery should be recharged. Insert UHER Storage Battery Z 214 into the battery compartment as shown in Fig. 1, marking certain the side with "+" and "—" markings faces upward.

1.2 Operation on UHER Bower/Charger Unit Z 145

UHER's power charger unit Z 145 is needed to operate the REPORT UNIVERSAL, on mains voltages (100 – 130 V or 200 – 240 V AC) or to recharge UHER storage battery Z 214.

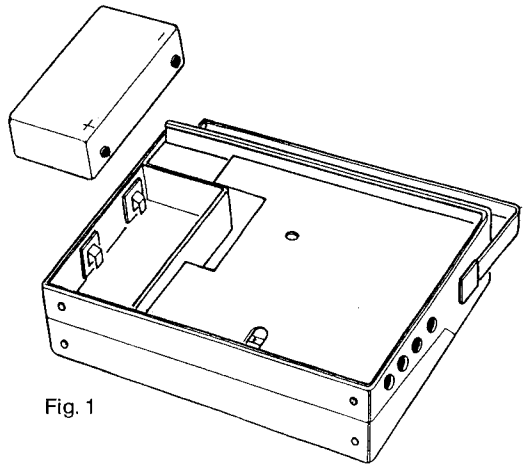

Fig. 1

Before making mains connection, ascertan the voltage of the mains power. Then, if necessary, use a coin to turn the voltage selector on PSU Z 145 (see Fig. 2) to the proper voltage reading.

Note also that the 100 mA fuse supplied in the Z 145 is for use with voltages from 100 to 130; for currents with 200 to 240 volts, the 100-mA fuse must be replaced by a 200 mA fuse. A coin may also be used to screw out the fuse holder.

Use UHER lead K 645 to connect the Z 145 to the REPORT UNIVERSAL, plugging the lead into the V socket on the side panel of the tape recorder. The Z 145 may itself be inserted into the bat-

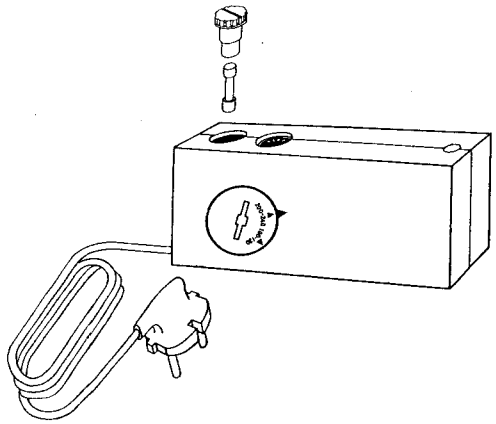

Fig. 2

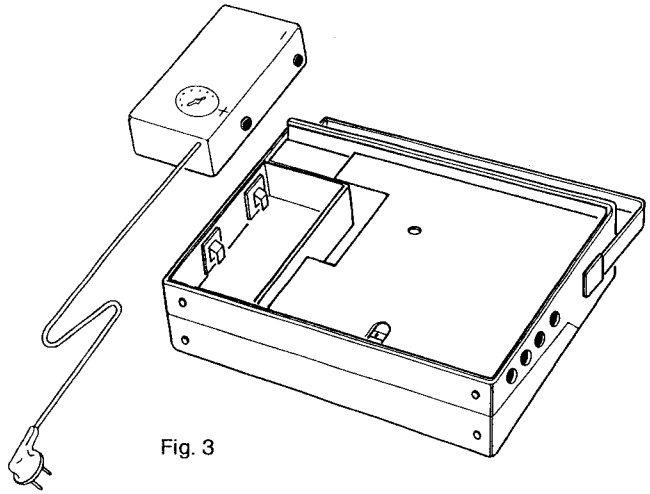

Fig. 3

tery compartment, however: Simply remove the bottom plate of the REPORT UNIVERSAL and insert the power/charger unit so that the lettered side faces upward and the lead may be run through the cutt-out in the bottom plate (see Fig. 3). The lead may then be plagged into a mains outlet.

1.3 Protection against Power Fall-Out

With a storage battery in the battery compartment during operation via power/charger unit Z 145 or car battery lead K 647, the REPORT UNIVERSAL will continue operation even upon fall-out of the external power source.

1.3.1 Recharging UHER Lead Storage Battery Z 214

With the Z 212 inserted in the battery compartment, use UHER lead K 645 to connect the side socket of PSU Z 145 to the △ socket on the UHER 6000 REPORT UNIVERSAL then connect the PSU to the mains outlet (see sec. 4). But do not switch on the recorder itself. A discharged storage battery in new condition will be fully recharged in approximately 15 hours.

1.4 Operation on Car Batteries

Using UHER lead K 647/12-V, UHER 6000 REPORT UNIVERSAL may also be powered by car batteries. The low power consumption of the recorder allows long operation without appreciable drain on the battery. For further details, see the instructions supplied with the connecting leads.

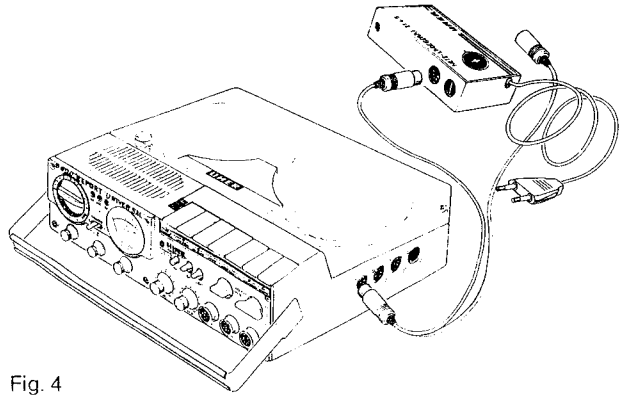

Fig. 4

Lead K 647 should always be used whenever operating the recorder from Z 145 or recharging storage battery Z 214 from 12.-V car batteries.

1.5 Insertion into the Carrying Case and Removal or Carrying Handle

UHER carrying cases Z 145 and Z 526 (all-cowhide) are designed for the UHER 6000 REPORT UNIVERSAL. Before inserting the recorder into the carrying case, however, first remove the carrying handle by pressing the ends of the handle in the direction of the arrow shown on them and then pusshing the handle toward the back. The handle may then be removed by lightly pulling its ends outward.

After iserting the recorder into the carrying case, the two ends of the carrying strap may be attached to the press-studs on the right and left sides of the recorder. To remove the strap, simply pull off the stud-caps (on the strap).

To re-mount the carrying handle, bend handle ends slightly outward and let the securing lugs (on the right and left sides of the recorder) snap onto the handle ends; then pull the handle forward.

2. Socket

Numbers in parantheses refer to the fold-out illustration at the end of the Operating Manual.

2.1 REMOTE (1)

Use this socket to connect remote-control switches for all deck functions, Start, Pause, Fast Forward, Fast Rewind, Record, Repeat, Record-Start, Record-Start-Pause, Stop and Brief Stop (nonlatching) may be activated by remote control. In addition, switching points are also provided for end-of-tape switching, search pulse marking, grounding as well as for delivering a supply voltage of + 9 V (100 mA).

2.2 MIC REMOTE (2)

Use this socket to connect UHER Remote-Control Microphone M 600.

2.3 Socket (3)

Connect headphones with 5-pin plugs (like UHER W 765 and W 775) to this socket. Headphones with LS-7 plugs, like UHER W 764 and W 774, require using Adapter K 633. With Adapter K 633, a loudspeaker (impedance 4 ohms) may also be connected to this socket; the second coupler of the adapter may not be used to connect a second speaker, however.

2.4 △ MONITOR Output (4)

This socket, by means of UHER inter-unit K 541, is for connecting an amplifier that is equipped with a monitor input. It is also the connector for powering through UHER Z 145 and from other external power sources.

2.5 Microphone Input (5)

This socket is for connecting low-impedance microphones like UHER M 518, with the remote-control swithing of which tape

transport may be interrupted (remote stop: 6 and 7) by simply holding down the switch on the microphone.

Pin 8 is charged with "+" voltage for powering a low-impedance electret condenser microphone (like UHER M 646) directly from the recorder.

2.6 AV Input/Output (6)

This socket is for connecting accessory equipment used in the double-track interlock method of synchronizing sound and film (DIN 15970).

When recording sound by this method, sync of sound and picture may be achieved by controlling either the speed of the film projector (called as in professional film recording "forward control") or that of the open-reel tape recorder ("backward control").

With the proper accessory, 1000-Hz pulses delivered by a film camera – at, for example every picture or every fourth picture – (according to the system used) may serve as the basis for regulating the speed.

In filming with live sound, the 1000-Hz pulses generated by the film camera are stored together with the sound recording on separate tracks of the tape (track 1 – sound track, track 3 – pulse track).

To this end, the pulse track system leads of the special AV record/playback head are run out to contacts 6 and 3 (3 = ground) of the AV socket.

The recorder is switched to PAUSE whenever contacts 5 and 4 (4 = ground) of the AV socket are connected together.

Forward control is needed in the unified sound system, for example, while backward control must be employed in systems like the Gigge Syn 2000, Symputer professional, Unisync and Synchromaster.

2.7 RADIO PHONO Input/Output (7)

This socket is a combined input and output for connection to a stereo tuner, receiver or amplifier that is equipped with DIN socketry. Use UHER inter-unit lead K 511 (mono) or K 541 (stereo) to connect the TAPE socket of the radio or amplifier.

To avoid loss of high frequencies in record and playback, connecting leads K 511 or K451 should be extended only by experienced service technicians, and then only if the output impedance of the input source permits. Record-players with crystal pick-ups may also be connected to the high-level input of this socket (pins 3/5 in parallel and 2 – 2 = ground).

3. Controls and Their Functions

Numbers in parentheses refer to the fold-out illustration of the recorder at the end of the Operating Manual.

3.1 On/Off Switch with speed Selector (17)

Turning this knob to the desired speed simultaneously switches the power on. Hence when the knob is position 1.2/2.4/4.7 or 9.5, the recorder is switched on, and the recorder meter illumination will also be on. Turn the knob to any "0" position to switch the recorder off.

3.2 Fast Forward Wind ▶▶ (19)

Tipping this key switches the recorder to fast forward wind, whereupon the yellow LED below the key will light up. If the recorder is set to the function START or PAUSE when this key (or the rewind key) is activated, the monitor-cueing circuitry will also go into operation.

The fast wind mode is switched off when the STOP key or one of the other function keys is pressed or when the end of the trape is reached (see sec. 3.5).

3.3 RECORD Key (20)

Pressing the RECORD key switches the machine to record mode, whereupon the record level may be set (see also sec. 7) – the MONITOR switch **(27)** must, however, be in S (source) position. Press the START key (**24**) to comence tape transport. The red LED RECORD below the RECORD key will light up when the REPORT UNIVERSAL is switched to record mode.

3.4 STOP Key (22)

Pressing this releases all function keys and stops tape transport.

3.5 PAUSE Key (23)

Pressing this key interupts tape movement in either record or playback mode until the START key **(24)** is pressed again.

3.6 START Key (24)

Pressing only this key switches the machine to playback mode and commences tape transport. To start tape movement for recording purposes, the RECORD key **(20)** must also be activated (see sec. 3.3).

Pressing the STOP key **(22)** stops tape transprt and switches the machine out of playback (or record) mode.

3.7 Rewind Key ◀◀ (25)

When this key is pressed, the recorder is switched to fast rewind mode and the yellow LED below the key lights up. If the recorder is set to the function START or PAUSE when this key (or the fast forwarde key) is activated, the monitor-cueing circuitry will also go into operation. The fast rewind mode switches off when the STOP key or one of the other function keys is pressed or when the end of the tape is reached (see. sec. 3.5).

3.8 Repeat Key ◀◀ ↦ (21)

As long as this key is held down, the tape will rewind. Releasing the key automatically switches the recorder to playback mode.

3.9 Zero-Reset Button for Counter (26)

Pressing this button returns the index counter reading to 000. To facilitate locating of the desired spot on the tape upon subsequent playback, it is advisable to press the reset key or to note the starting index number before commencing each recording.

3.10 Battery Check Key BATT. (11)

Press down this key while the machine is switched on, and the level meter **16)** will indicate battery strength at that moment. As long as the pointer remains in the green segment of the meter scale, the power supply is sufficient for flawless operation (see also sec. 1.1.2).

3.11 Pulse record Key ++ (9)

With the REPORT UNIVERSAL set to record mode and the CUE switch in ON position, pressing this key records a cueing pulse on the tape.
Pulse location:
With the fast wind (forwarde or rewind), PAUSE and CUE functions switched on, the pulses recorded on track two cause the recorder to go into the STOP position briefly (c. 1. sec.). If no other function key (like START) is pressed, the tape will then move on to the next pulse marking.

3.12 Record Level Control (15) and Level Meter (16)

Use this control **(15)** to set the machine to the optimal record level (see sec. 7 "Record Operation"). The meter **(16)** will indicate the level during both record and playback.

3.13 Monitor Volume Control VOL. (10) with On/Off Switch for Built-In speaker

This knob is for regulating volume during record or playback when monitoring through the built-in loudspeaker, an external speaker or headphones. Position detents prevent accidental alteration of the volume level setting.

Pull out the knob **(10)** to switch off the bilt-in loudspeaker.

3.14 TONE control (12)

This knob regulates the playback of high frequencies. With the knob in position on, the high frequencies will not be affected. Treble de-emphasis be maximal when the knob is in off position.

Controls **(10)** and **(12)** do not affect the recorded signal.

3.15 ALC On/Off Switch (18)

This switch activates the automatic level control circuitry during record operation. With the switch turned to OFF, the ALC is out of circuit. Set the switch to FAST when recording speach and to SLOW for music.

3.16 MONITOR Switch (27)

Use this switch to select the monitoring mode: T (from tape) or S (from souce), thus also to permit immediate aural control of the quality of the recorded sound. When the switch is set to off-tape monitoring, the signal just recorded on the tape is heard, whereas in the from-source setting the original signal of the input source is heard while it is being recorded. By direct comparison of the two signals, recording errors may be clearly recognized. Switching from source to off-tape monitoring automatically switches over the monitor output and the level meter.

3.17 VAC/TIME Switch (8)

UHER 6000 REPORT UNIVERSAL is equipped with switchable "Akustomat" circuitry and a spacing time regulator, see sec. 7.6.

3. Controls and Their Functions

Numbers in parentheses refer to the fold-out illustration of the recorder at the end of the Operating Manual.

3.1 On/Off Switch with speed Selector (17)

Turning this knob to the desired speed simultaneously switches the power on. Hence when the knob is position 1.2/2.4/4.7 or 9.5, the recorder is switched on, and the recorder meter illumination will also be on. Turn the knob to any "0" position to switch the recorder off.

3.2 Fast Forward Wind ►► (19)

Tipping this key switches the recorder to fast forward wind, whereupon the yellow LED below the key will light up. If the recorder is set to the function START or PAUSE when this key (or the rewind key) is activated, the monitor-cueing circuitry will also go into operation.

The fast wind mode is switched off when the STOP key or one of the other function keys is pressed or when the end of the trape is reached (see sec. 3.5).

3.3 RECORD Key (20)

Pressing the RECORD key switches the machine to record mode, whereupon the record level may be set (see also sec. 7) – the MONITOR switch **(27)** must, however, be in S (source) position. Press the START key **(24)** to comence tape transport. The red LED RECORD below the RECORD key will light up when the REPORT UNIVERSAL is switched to record mode.

3.4 STOP Key (22)

Pressing this releases all function keys and stops tape transport.

3.5 PAUSE Key (23)

Pressing this key interupts tape movement in either record or playback mode until the START key **(24)** is pressed again.

3.6 START Key (24)

Pressing only this key switches the machine to playback mode and commences tape transport. To start tape movement for recording purposes, the RECORD key **(20)** must also be activated (see sec. 3.3).

Pressing the STOP key **(22)** stops tape transprt and switches the machine out of playback (or record) mode.

3.7 Rewind Key ◄◄ (25)

When this key is pressed, the recorder is switched to fast rewind mode and the yellow LED below the key lights up. If the recorder is set to the function START or PAUSE when this key (or the fast forwarde key) is activated, the monitor-cueing circuitry will also go into operation. The fast rewind mode switches off when the STOP key or one of the other function keys is pressed or when the end of the tape is reached (see. sec. 3.5).

3.8 Repeat Key ◄◄ ↦► (21)

As long as this key is held down, the tape will rewind. Releasing the key automatically switches the recorder to playback mode.

3.9 Zero-Reset Button for Counter (26)

Pressing this button returns the index counter reading to 000. To facilitate locating of the desired spot on the tape upon subsequent playback, it is advisable to press the reset key or to note the starting index number before commencing each recording.

3.10 Battery Check Key BATT. (11)

Press down this key while the machine is switched on, and the level meter **16)** will indicate battery strength at that moment. As long as the pointer remains in the green segment of the meter scale, the power supply is sufficient for flawless operation (see also sec. 1.1.2).

3.11 Pulse record Key ++ (9)

With the REPORT UNIVERSAL set to record mode and the CUE switch in ON position, pressing this key records a cueing pulse on the tape.
Pulse location:
With the fast wind (forwarde or rewind), PAUSE and CUE functions switched on, the pulses recorded on track two cause the recorder to go into the STOP position briefly (c. 1. sec.). If no other function key (like START) is pressed, the tape will then move on to the next pulse marking.

3.12 Record Level Control (15) and Level Meter (16)

Use this control **(15)** to set the machine to the optimal record level (see sec. 7 "Record Operation"). The meter **(16)** will indicate the level during both record and playback.

3.13 Monitor Volume Control VOL. (10) with On/Off Switch for Built-In speaker

This knob is for regulating volume during record or playback when monitoring through the built-in loudspeaker, an external speaker or headphones. Position detents prevent accidental alteration of the volume level setting.

Pull out the knob **(10)** to switch off the bilt-in loudspeaker.

3.14 TONE control (12)

This knob regulates the playback of high frequencies. With the knob in position on, the high frequencies will not be affected. Treble de-emphasis be maximal when the knob is in off position.

Controls **(10)** and **(12)** do not affect the recorded signal.

3.15 ALC On/Off Switch (18)

This switch activates the automatic level control circuitry during record operation. With the switch turned to OFF, the ALC is out of circuit. Set the switch to FAST when recording speach and to SLOW for music.

3.16 MONITOR Switch (27)

Use this switch to select the monitoring mode: T (from tape) or S (from souce), thus also to permit immediate aural control of the quality of the recorded sound. When the switch is set to off-tape monitoring, the signal just recorded on the tape is heard, whereas in the from-source setting the original signal of the input source is heard while it is being recorded. By direct comparison of the two signals, recording errors may be clearly recognized. Switching from source to off-tape monitoring automatically switches over the monitor output and the level meter.

3.17 VAC/TIME Switch (8)

UHER 6000 REPORT UNIVERSAL is equipped with switchable "Akustomat" circuitry and a spacing time regulator, see sec. 7.6.

3.18 DNR Switch (13)

Use this switch to activate the noise suppression circuitry that improves the unweighted signal-to-noise ratio by approximately 5 dB and the weighted S/N by approximately 13 dB. The NR system operates during playback and is then indicated by a yellow LED on the front panel.

3.19 CUE Switch (14)

When this switch is in OFF position, the pulse recording device is switched off and the tape can be recorded on both tracks. With ths switch in ON position (indicated by a green LED on the front panel), track 2 is used for recording pulses.

ATTENTION: Previous recordings on track 2 will thereby be erased. With CUE ON, it is also possible to erase the control pulses recorded for AV operation.

4. Preparing for Record or Playback Operation

4.1 Loading the tape

With portable recorders it is essential to prevent the tape reels from slipping off their spindles. Before placing the tape reels in position, pull up the two three-pronged mandrels of the reel holders and turn them until the prongs of the movable sections rest on those of the stationary sections as shown in Fig. 6. Next, load the full reel onto the left spindle and an empty reel onto the right spindle. Afterwards, run out a tape lead of some 10 inches from the full (supply) reel, inserting it (without slack and as shown in the illustration) past the roller of the tape tension regulator vertically into the threading slot; then run about 1/4" of the free end of the tape lead up into the slot of the empty (take-up) reel. Turn the take-up reel to the left until one complete winding of tape is on the reel. Make certain that the bright side of the tape lead and the dull side (the coated side) of the tape face inward toward the core of the reel.

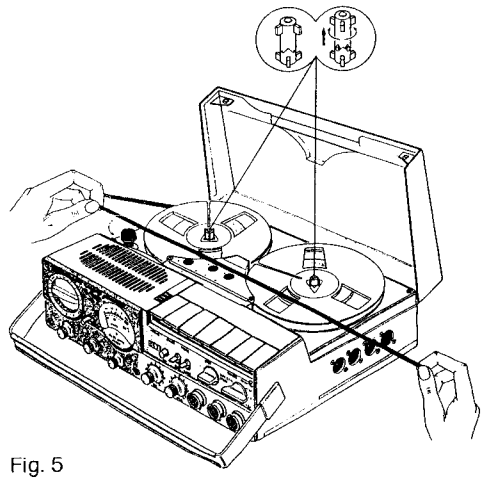

Fig. 5

Lastly, secure the two reels by turning the two three-pronged mandrels to the right or to the left until the movable sections snap down into the stationary sections. The reels can then neither fall off nor be taken off.

4.2 Selecting the tape speed and switching the recorder on

Turn the tape speed selector **(17)** to the appropriate speed setting. The recorder will then be switched on and the record meter illumination will also be on.

The table below indicates which speed is recommended in various cases.

Tape Speed	Recording Time	Frequency Range	Application
$^{15}/_{32}$ ips	2 × 8 hrs.	20 – 4000 Hz	For recordings with good speech understandability and extremly long recording time.
$^{15}/_{16}$ ips	2 × 4 hrs.	20 – 8000 Hz	For recordings in which a long recording time is more important than tonal quality.
$1\,^{7}/_{8}$ ips	2 × 2 hrs.	20 – 15000 Hz	For recordings in which a long recording time is mor important than highest tonal quality, although tonal quality should be very good.
$3\,^{3}/_{4}$ ips	2 × 1 hrs.	20 – 22000 Hz	For hi-fi recordings in which excellent tonal quality is required.

Recording times refer to double-play tape.

5. Connecting UHER 6000 REPORT UNIVERSAL to a receiver or amplifier system for record and playback

For equipment with DIN socketry, use UHER inter-unit lead K 511 or K 541 to connect the RADIO PHONO socket **(7)** of the UHER 6000 REPORT UNIVERSAL to the tape input socket of the amplifier, preamplifier/control centre, receiver or tuner.

A mono adapter lead (available at audio outlets) is required to connect the UHER 6000 REPORT UNIVERSAL equipment with phono jacks. Make certain when connecting the equipment that the phono-type plugs for record and playback – they will have identifying markings – are plugged into the proper jacks.

When connecting UHER 6000 REPORT UNIVERSAL to an amplifier or receiver with monitor circuitry, connection will also have to be made between the MONITOR socket **(4)** of the recorder to the monitor input of the receiver or amplifier by means of a second UHER K 541 lead (with equipment having a DIN socket as monitor input) or a commercially available adapter lead with a DIN plug on one end and phono plugs on the other end (for equipment having phono jacks).

6. Playback Operation

Once the recorder is switched on, simply press the START key **(22)** to commence playback. Playback may be through the built-in speaker, an external loudspeaker, a radio, a hi-fi sound system or headphones. Any amplifier system, regardless of output power, may be used for playback. Stereo equipment, however, must be switched to mono operation.

6.1 Playback through built-in speaker

Switch on loudspeaker and adjust volume and tone controls VOL. **(10)** and TONE **(12).** If necessary, push in the TONE control **(17)** to switch on the speaker (see sec. 3.13).

6.2 Playback through a hi-fi system or radio set

Connect equipment as described in sec. 5. The recorder's built-in speaker may be left on, or it may be switched off by pulling out VOL. **(10).** Use controls of the hi-fi amplifier system or radio to adjust volume and tone.

6.3 Playback through headphones

Connect headphones (like UHER W 675 or W 775) with a 5-pin plug to the socket **(7)** on the front panel of the recorder; headphones (like UHER W 676 or W 776) with phono plugs may be connected to the same socket by means of an adapter. Adjust volume and tone with controls VOL. **(10)** and TONE **(12).**

7. Record Operation

A) Connecting input sources

Connect equipment as described in secs. 5 and/or 2.7 and 2.5. It is unimportant whether completely new tape or recorded tape is used bacause with every new recording the machine erases any previous one.

B) Setting the correct record level

Adjusting to the correct signal strength for recording is called "setting the record level" and is reflected by the level meter **(16).** Turn level control REC **(15)** to the right until the level meter registers 0 dB at the loudest programme passages. If the correct record level is not reached, the quality of the subsequent playback will be unsatisfactory: there will be strong tape hiss because the optimal signal-to-noise ratio of the machine will not have been fully utilized. When the pointer moves into the red segment of the meter scale, the recording will be overloaded, and pllayback will be distorted. Consequently, particular attention should be given to setting the correct record level. The level meter registers peak signal reading on a scale calibrated in dB.

C) Choosing the type of level control

The type of level control should depend upon the situation and conditions in which the recording is to be made. For home

recordings like the taping of radio broadcasts and phonograph records or tape copying – for which there is enough time to set the optimal record level – level control should be manual: with the ALC switch **(18)** turned to "Off" position.

As a rule the automatic level control should be used in reporting and other live recording (shether of speech or music), including recording for sound films, dictation and for recording conferences. Hence, in recording speech the ALC switch **(18)** should be turned to position FAST: in recording music (folk music) it should be set to position SLOW.

7.1 Recording from microphone

Plug microphone into socket **(5)** on the front panel of the recorder. The microphone socket is equipped with a locking device to safeguard the plug connection.

1. Press reset button**(26)** to return index counter to 000 reading.
2. Set tape speed selector **(17)** appropriate position (see also sec. 4.2).
3. Press RECORD key **(20)** and set the MONITOR switch **(27)** in S (source) position.
4. Adjust record level control (see secs. 7B and 7C). In setting the record level manually, turn control **(15)** to the right until the level meter registers 0 dB on its scale at the loudest passages subsequently to be recorded, making certain that the volume and the microphone position (relative to sound sources) are the same as will be in actual recording.
5. Adjust monitor volume with control VOL. **(10)** so as to avoid howling due to acoustical feedback. If necessary, switch off built-in monitor speaker by pulling out the TONE control knob **(12).**
6. Also press the START key **(24)**, and recording will commence.
7. When recording with microphones not quipped with a start/stop switch, use the PAUSE key **(23)** to interrupt recording briefly. When recording with UHER remote-control microphone M 518, press and hold down the switch on the microphone as long as the recording should be interrupted; during this time the yellow LED indicator will be lighted.
8. Check sound quality of recording by switching back and forth from source (S) to off-tape (T) monitoring with switch **(27).**
9. When record is over, press the STOP key **(22).**
10. Switch off the machine by turning the tape speed selector **(17)** to a position marked 0.

7.2 Taping radio broadcasts

Connect recorder to hi-fi system or radio set as desdcribed in sec.5. Switch on radio and tune te desired station. Volume and tone controls on the hi-fi amplifier or the radio will not affect the recording. In general, then follow the procedure described in sec. 7.1.

7.3 Recording from record-player

A) Recording directly from record-player

Only record-players equipped with a crystal, ceramic, mangetic or dynamic pick-up system and with built-in equalizing preamplifier may be used for direct recording.

1. Connect record-player to RADIO PHONO socket **(7)** – by means of an adapter lead if the record-player has phono connectors.
2. Select tape speed and press RECORD key **(20).**
3. Switch on record-player. Set tonearm on record and adjust record level (see sec.7B).
4. After making record level test, return tonearm to starting grooves of the record and commence tape transport by pressing START key **(24).**

Then follow the same general procedure that is described in sec. 7.1.

B) Recording from record-player connected to a hi-fi sound system or to a radio

1. Connect equipment to UHER 6000 REPORT UNIVERSAL as described in sec. 5.
2. Switch sound system or radio to phono playback.

Then follow the general procedure stated in items 2 to 4 of sec. 7.3A.

7.4 Recording from a second tape recorder (dubbing)

Many cases arise in which recordings need to be copied from one tape machine onto another. The procedure should be as follows:

All UHER tape recorders are now equipped with a standardized radio record/playback socket that is labelled either ⅄ or Radio/Phono. Plug one end of the connecting lead into the Phono input socket of the reccording machine. The phono input socket on UHER recorders is labelled either ⌀ or Radio/Phono. In accordance with their respective operating instructions, switch the playback machine to playback mode and the recording machine to record mode. Nos pecial switching to the phono input is needed when recording on UHER 6000 REPORT UNIVERSAL however. The correct record level, on the other hand, must be set just as in other types of recording.

This procedure also applies to other makes of tape recorders if they are equipped with standardized socketry.

7.5 Recording from telephone

UHER 6000 REPORT UNIVERSAL may also be used to record telephone conversations. UHER telephone adapter A 261 will be required, however. The operating instructions supplied with the adapter contain all additional details.

Tape recorder operation is the same as in other types of recording

7.6 Recording with Akustomat VAC/TIME

The Akustomat is an electronic-acoustical switch that — once UHER 6000 REPORT UNIVERSAL has been switched into record mode (with RECORD and START keys depressed) — automatically starts tape transport at the onset of sound an automatically stops tape movement when sound ceases. By turning the regulating knob to the right, the spacing time may be extended from about 0.5 to a maximum of 5 seconds after each cessation of sound.

8. Care and Maintenance

UHER 6000 REPORT UNIVERSAL is constructed in keeping with the latest technology. It has been carefully inspected and will operate almost free of servicing for a long time. Under normal conditions and use it is not necessary to oil or lubricate any moving parts for years. It is only necessary to check from time to time to see whether deposits of dust or bits of tape coating have formed on the magnetic heads; if yes, the record and playback tone will become muddy and the high frequencies noticeably missing.

For cleaning, remove the cover (A) located directly behind the control keys (see Fig. 6). The pressure roller (B), tap guides (C), (D), (E) and tape heads (F), (G), (H) will then be easily accessible and may be cleaned with any of the cleaning kits regularly available on the market. The capstan (I) should also be cleaned to remove any particles of dust or tape coating that may have accumulated on it.

UHER 6000 REPORT UNIVERSAL is a highly developed precision machine; its trouble-free operation depends upon the exact co-functioning of its mechanical and electrical components. Should malfunctions appear at any time, we recommend consulting an experienced technician or the nearest UHR servicing depot where experienced hands will be able to correct the difficulty (that will usually be of minor nature) easily. We warn strongly against any tampering by non-technicians.

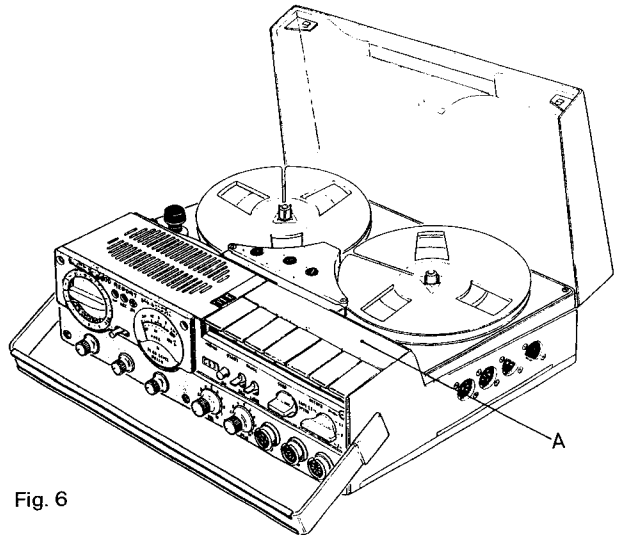

Fig. 6

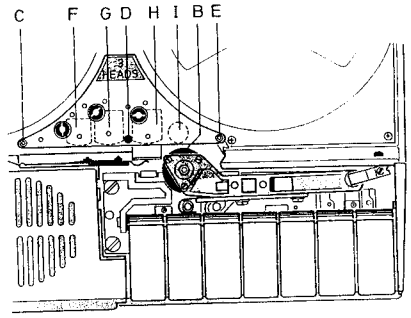

Fig. 7

9. Forther Hints and Tips

9.1 Microphone recordings

Not even the world's finest microphone will bring satisfactory results if it is placed too far away from the sound source that it is to pick up. Background noises that the human ear would not notice will be recorded and will disturb subsequent playback. Room characteristics, too, play an extremely important role in achieving good recordings. Rooms with bare walls are called "live" rooms and are not well-suited for recording with microphones.

Needless to say, respectable recordings (although never of high quality) can be made even if the microphone is relatively far away from its sound source, but in such cases the explanation lies totally in the accompaning circumstances, especially in terms of background noises present and room characteristics.

It is advisable to use a wind shield for the microphone when recording in open air. If necessary, a light cloth (like a handkerchief or a chiffon scarf) may be used to improvise a wind shild. Recommended distances between sound source and microphones (when special microphones are not used) for various kinds of recording are:

Speech

approximately 30 to 50 cm (12" to 20") – with directional microphones shorter distances result in muffled recordings.

Vocal solos

approximately 1 m ($3^1/_3$ ft) – shorter distances overemphasize breathing sounds.

Pianos and other solo instruments

$1^1/_2$ to 2 m (5 to $6^2/_3$ ft) – especially when recording the piano, careful attention must be given to moving the microphone around until the best placement is found.

Orchestra and choral groups

centered approximately 2 m ($2^2/_3$ ft) above and 3 to 4 m (10 to $13^1/_3$) in front of the ensemble.

Small instrumental groups

approximately 5 ft from all instruments (arranged in a semicircle around the microphone).

Conferences

If possible, hang the microphone above the conference table at equal distance from all participants. Bear in mind that intelligibility in recording is strongly impaired when several people speak simultaneously.

Stands, extension leads, mixers, microphones, etc., are listed in the brochure on UHER accessories.

9.2 Half-track recording

UHER 6000 REPORT UNIVERSAL employs a half-track recording system with internationall standard track width. This means that, as the tape moves from left to right, only its upper half is recorded. Thus when the tape is first wound onto the take-up reel, the lower half of the tape is still unrecorded. Turning the full

reel over and loading it on the left spindle automatically brings the unused half into the upper position for recording. The two halves of the tape are called tracks 1 and 2. To distinguish the two, a green lead is attached to the beginning end of track 1, a red lead to the beginning of track 2. Always commence recording with the green lead, in other words with track 1.

It must absolutely be remembered that when setting cueing pulses – with the CUE switch in ON position – recordings already on track 2 will be erased.

9.3 Tips on tapes and their charactersistics

The monitor circuit of the recorder permits optical control of the playback signal both during record – with monitor switch set to T (off-tape) – and during subsequent playback. Although the 0 dB mark may have been reached with the monitor switch set to S (from source) during record, with the switch in off-tape position or during playback the pointer on the level meter may not reach the 0 dB mark or it may move byond that mark. This effect will not influence the record quality (as may be confirmed by an aural check); it is due to the tolorances of tape sensitivity. Wavy tapes cause sound fall-outs just as do tapes with accumulations of dust or bits of tape coatings on them. When such difficulties arise – for example, at sound fall-outs during record or playback – first carefully check the tape used (see also sec. 8).

Although today's taps are to a great extent unaffected by temperatures, they should nonetheless be stored at a normal room temperature and in a dust-free place, preferably in special storing containers. They should not be stored near magnets or magnetic fields under any condition.

Tapes that do not have standard width may not be used with UHER 6000 REPORT UNIVERSAL. Tapes designed for professional use are not suited for use with home tape machines due to both their electro-acoustical properties (hiss, frequency range) and their mechanical properties (greater surface roughness-wear on tape head).

10. Specifications

All data quoted meet German DIN test requirements for magnetic tape recorders BASF Normcharge C 264 Z has been employed for all tests involving tape.

Format:	portable tape recorder with 3 heads and equipped for full remote control and off tape monitoring.
Tape:	1/4" magnetic reel tape (to DIN 45512 part 1).
Max. Reel Size:	13 cm (5").
Track System:	half track (DIN 45511 part 1).
Tape Speeds:	1.2, 2.4, 4.7 and 9.5 cm/s. 15/32, 15/16, 1 7/8, 3 3/4 ips.
Drive System:	1 DC motor for electronically controlled capstan drive; 2 DC motors for hub drive with electronic tape-tension regulation. 1 servo motor for mechanical drive (pressure roller, winding elements); 1 breaking magnet.
Max. Speed Deviation:	± 1.5%.
Wow and Flutter (max.):	± 0.2% at 9.5 cm/s (3 3/4 ips) ± 0.35% at 4.7 cm/s (1 7/8 ips) ± 0.4% at 2.4 cm/s (15/16 ips) ± 0.6% at 1.2 cm/s (15/32 ips).
Crosstalk at 1 kHz:	better than 60 dB
Erasure at 1 kHz:	better than 80 dB.
ALC:	range 36 dB transient time 30 ms for 10 dB jump decay time: SLOW position 60 s for 10 dB jump FAST position 6 s for 10 dB jump.
AV Connecting Facility: (for film dubbing and slide-projector contr.)	connector to DIN 45322 requirements with bayonet locking and wiring in accordance with DIN 15970 Part 2
Socket △:	for connecting UHER power/charger unit Z 145, external power supply and amplifier systems equipped with monitor input.
Power Supply:	mains via UHER Z 145; 6-volt storage battery UHER Z 214 or other DC power sources, e. g. via UHR K 647 from a 12-volt car or boat battery.
Power Consumption:	approximately 9 W with storage battery.
Dimensions in cm:	28.5 × 9.5 × 22.7 (11 1/2" × 4" × 9").
Weight:	approximately 3.7 kg
Bias frequency:	100 kHz.
Record Level Meter:	moving-coil, peak-reading incication during record and playback, switchable for indication of battery strength.

Tape Speed	9.5 cm/s	4.7 cm/s	2.4 cm/s	1.2 cm/s
Frequency Response	20 Hz – 22 kHz	20 Hz – 15 kHz	20 Hz – 8 kHz	20 – 4 kHz
MOL	– 7 dB (10 kHz)	– 10 dB (10 kHz)	– 13 dB (7 kHz)	– 14 dB (3 kHz)
Signal-to-Noise Ratio (unweighted)	60 dB/67 dB*	52 dB/58 dB*	52 dB/58 dB*	52 dB/58 dB*
Signal-to-Noise Ratio	64 dB/77 dB*	56 dB/70 dB*	54 dB/67 dB*	54 dB/67 dB*

* with DNR

Inputs	Wiring	Input Voltage Range	Input Imedance
Radio	1/4 II & 2 (2 = ground)	2 mV – 220 mV	12 kohms
Mike	3/5 II & 2 (2 = ground) pin 8 + 8 V	0.22 mV – 30 V source imped. 200 ohms	c. 2 kohms
Phono (high level)	3/5 II & 2 (2 = ground)	30 mV – 1.3 V	750 kohms
Outputs	Wiring	Output voltage	Output Impedance
Radio	3/5 II & 2 (2 = ground)	775 mV (0 dB)	4.7 kohms
Monitor △	3/5 II & 2 (2 = ground)	775 mV (0 dB)	680 ohms
Headphones	4/5 II & 3/2/1 (ground)	3 V (w/o load) 2.8 V at 4 ohms – 2 W	
Mic/Remote	11 & 10 (10 = ground)	2.7 v at 33 ohms – 220 mW	———

Features:

- fully electronic 4
- motor drive system (1 DC motor for capstan drive, 2 DC forhub drive, 1 servo motor for mechanical regulation) with remote control facility;
- electronic tape-tension Control;
- built-in switchable "Akustomat" (acoustic on/off switch)
- DNR noise suppression;
- cueing pulse recording for rapid location of tape section;
- ALC with switchable time constants for speach and music;
- 3-head tape recorder with monitor switching for off-tape control;
- level control by means of illuminated, peak-reading level meter;
- playback level indication;
- LED operation indicators;
- Remote socket for remote control of 12 functions;
- sturdy, low-wear all-metal casin of diecast aluminium;
- diecast aluminium head mount;
- repeat facility:
- built-in monitor loudspeaker, switchable;
- supply voltage at Remote, Mic/Remote and mik sockets;
- 3-digit tape counter;
- film dubbing facility (AV socket);
- LED end of tape and tape-breakage indication;
- easy-action touch-key controls with LED status indicators
- 4 tape speeds.